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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,620	07/30/2003	Akira Nagashima	03500.015658.1	9125

5514 7590 07/15/2004

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EXAMINER

FAISON, VERONICA F

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/629,620	<b>Applicant(s)</b> NAGASHIMA ET AL.	
	<b>Examiner</b> Veronica F. Faison	<b>Art Unit</b> 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-45,47 and 48 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-45,47 and 48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/923,417.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7-30-03</u> . | 6) <input type="checkbox"/> Other: ____  |

**DETAILED ACTION*****Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-36 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 6, 8 and 10-36 of copending Application No. 09/923,993. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are directed to a fluorescent ink composition.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-36 are directed to an invention not patentably distinct from claim 1-3, 6, 8 and 10-36 of commonly assigned 09/923,993. Specifically, both applications are directed to a fluorescent ink composition.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP

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§ 2302). Commonly assigned 09/923,993, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee is required under 37 CFR 1.78(c) and 35 U.S.C. 132 to either show that the conflicting inventions were commonly owned at the time the invention in this application was made or to name the prior inventor of the conflicting subject matter. Failure to comply with this requirement will result in a holding of abandonment of the application.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 23 and 43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 23, Applicant states that "the nonionic surfactant is not separated at an interface of the ink in a state of an ink from which the component (ii) has been removed.

The Examiner is confused, because claim 1 requires component (ii). Why or how it being removed. Please clarify.

In claim 43, Applicant states "the ink from which the compound exhibiting fluorescence properties and/or the coloring material exhibiting fluorescence properties, additives and the other coloring material have been removed is nonionic". The Examiner is confused, because claim 1 requires the compound exhibiting fluorescence properties and/or the coloring material exhibiting fluorescence properties. Why or how it being removed. Please clarify.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7-15, 17-22, 24-26, 35, 36, 38-45 and 47-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Teraoka et al (US Patent 5,865,883).

Teraoka et al teach an ink for ink jet recording comprising a dye having a pyrene ring and triethanolamine (col. 3 lines 49-51). The dye having the pyrene ring may be a water-soluble fluorescent dye such as Solvent Green 7 which may be used the in the ink composition in the amount from 0.2 to 8 percent by weight (col. 3 line 56-col. 4 line 20). The reference further teaches that the pH value of the ink composition is in the range of 9 to 14 (col. 4 lines 45-50). The liquid medium of the ink composition is a mixture of water and a water-soluble organic solvent which includes ethylene glycol,

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diethylene glycol, glycerin (first organic compound of (i)), ethanol and isopropyl alcohol present the in the amount of 10 to 40 percent by weight (col. 5 lines 10-34). A nonionic surfactant (second organic compound of (i)) may be present in the ink composition which includes surfactants such as ethylene oxide adducts of acetylene glycol (which is known to have the formula set forth in claim 25 and also known as Acetylenol EH in examples), present in the amount of 0.01 to 10 percent by weight (col. 5 lines 40-66). Other additives such as urea and urea derivative, viscosity modifier, preservative, antioxidant and fungicide may be present in the ink composition (col. 6 lines 9-14). The reference also teaches magenta ink composition comprising a water-soluble fluorescent dye such as Acid Red 52 present in the amount of 0.2 to 8 percent by weight (col. 7 lines 17-30). The liquid medium of the ink composition is a mixture of water and a water-soluble organic solvent which includes ethylene glycol, diethylene glycol, glycerin (first organic compound of (i)), ethanol and isopropyl alcohol present the in the amount of 10 to 40 percent by weight (col. 8 lines 17-42). A nonionic surfactant (second organic compound of (i)) may be present in the ink composition which includes surfactants such as ethylene oxide adducts of acetylene glycol (which is known to have the formula set forth in claim 25 and also known as Acetylenol EH in examples), present in the amount of 0.01 to 10 percent by weight (col. 8 line 49-col. 9 line 8). Other additives such as urea and urea derivative, viscosity modifier, preservative, antioxidant and fungicide may be present in the ink composition (col. 9 lines 17-23). The reference remains silent as to the physical properties of the ink composition. However, ink compositions composed of the same the components would inherently have the same physical properties that

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are claimed by Applicant. See examples for specific combinations of the above components claimed by Applicant. The composition as taught by Teraoka et al appears to anticipate the claimed invention.

Claims 1-3, 7-21, 24-26, 39-42 and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Tochiara et al (US Patent 5,485,188).

Tochiara et al teach ink compositions for ink jet recording comprising an anion dyestuff and a nonionic surfactant (abstract and col. 3 lines 21-67). The nonionic surfactant (second organic compound) present in the ink composition include adduct of acetylene glycol and polyethylene oxide (which known to have the structure set forth in claim 25) in the amount of 0.5 to 20 percent by weight (col. 5 lines 1-10). The reference further teaches that Acid Red 52 (which is fluorescent) may be used as an anion dyestuff present in the magenta ink in the amount of 0.1 to 5 percent by weight (col. 5 lines 17-23). The liquid medium may be a mixture of water and water-soluble organic solvent such as diethylene glycol, monohydric alcohol including ethanol and glycerin (first organic compound), which may be used alone or in combination in the amount of 5 to 40 percent by weight (col. 5 lines 40-56). The reference also teaches that various constituents may be added to the ink composition including urea or a derivative of urea and pH regulator (col. 5 lines 58-65). See the examples for specific combinations of the above components specifically the magenta ink compositions. The ink composition as taught by Tochiara et al appears to anticipate the claimed invention.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6, 27 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teraoka et al (US Patent 5,865,883).

Teraoka et al teach an ink for ink jet recording comprising a dye having a pyrene ring and triethanolamine (col. 3 lines 49-51). The dye having the pyrene ring may be a water-soluble fluorescent dye such as Solvent Green 7 which may be used in the ink composition in the amount from 0.2 to 8 percent by weight (col. 3 line 56-col. 4 line 20). The reference further teaches that the pH value of the ink composition is in the range of 9 to 14 (col. 4 lines 45-50). The liquid medium of the ink composition is a mixture of water and a water-soluble organic solvent which includes ethylene glycol, diethylene glycol, glycerin (first organic compound of (i)), ethanol and isopropyl alcohol



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(monohydric alcohol) present the in the amount of 10 to 40 percent by weight (col. 5 lines 10-34). A nonionic surfactant (second organic compound of (i)) may be present in the ink composition which includes surfactants such as ethylene oxide adducts of acetylene glycol (which is known to have the formula set forth in claim 25 and also known as Acetylenol EH in examples), present in the amount of 0.01 to 10 percent by weight (col. 5 lines 40-66). Other additives such as urea and urea derivative, viscosity modifier, preservative, antioxidant and fungicide may be present in the ink composition (col. 6 lines 9-14). Teraoka et al fail to specifically exemplify the use of fluorescent colorant wherein it is in amount of at most 1 percent, monohydric alcohol and specific urea derivative as claimed by applicant. The reference discloses urea and urea derivatives, which is broad enough to encompass the derivative claimed by Applicant. Therefore, it would have been obvious to one of ordinary skill in the art to use the fluorescent colorant wherein it is in amount of at most 1 percent, monohydric alcohol and specific urea derivative as claimed by applicant as Teraoka et al also discloses the use of fluorescent colorant wherein it is in amount of at most 1 percent, monohydric alcohol and specific urea derivative but shows no example incorporating them.

Claims 5-6, 27 and 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tochihara et al (US Patent 5,485,188).

Tochihara et al teach ink compositions for ink jet recording comprising an anion dyestuff and a nonionic surfactant (abstract and col. 3 lines 21-67). The nonionic surfactant (second organic compound) present in the ink composition include adduct of acetylene glycol and polyethylene oxide (which known to have the structure set forth in claim 25)

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in the amount of 0.5 to 20 percent by weight (col. 5 lines 1-10). The reference further teaches that Acid Red 52 (which is fluorescent) may be used as an anion dyestuff present in the magenta ink in the amount of 0.1 to 5 percent by weight (col. 5 lines 17-23). The liquid medium may be a mixture of water and water-soluble organic solvent such as diethylene glycol, monohydric alcohol including ethanol and glycerin (first organic compound), which may be used alone or in combination in the amount of 5 to 40 percent by weight (col. 5 lines 40-56). The reference also teaches that various constituents may be added to the ink composition including urea or a derivative of urea and pH regulator (col. 5 lines 58-65). Tochiara et al fail to specifically exemplify the use of fluorescent colorant wherein it is in amount of at most 1 percent, monohydric alcohol and specific urea derivative as claimed by applicant. The reference discloses urea and urea derivatives, which is broad enough to encompass the derivative claimed by Applicant. Therefore, it would have been obvious to one of ordinary skill in the art to use the fluorescent colorant wherein it is in amount of at most 1 percent, monohydric alcohol and specific urea derivative as claimed by applicant as Tochiara et al also discloses the use of fluorescent colorant wherein it is in amount of at most 1 percent, monohydric alcohol and specific urea derivative but shows no example incorporating them.

Claims 1-3, 5-7, 10, 12-15, 17-20, 24-26, 28-37, 39-42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al (US Patent 6,176,908) in view of Teraoka et al (US Patent 5,865,883).

Bauer et al teach an aqueous fluorescent red ink jet ink comprising an aqueous vehicle, a red or magenta pigment, a polymeric dispersant, a fluorescent dye (abstract and col. 1 line 66-col. 2 line 5). The aqueous vehicle is a mixture of water and at least one water soluble or water miscible organic solvent such as glycol or glycol ether, wherein the mixture is present in the amount of 70 to 99.8 percent by weight (col. 2 lines 48-67). The colorant present in the ink composition contains at least one red or magenta pigment and a fluorescent red dye. The ink may also contain a yellow pigment and/or yellow dye, which may be either fluorescent or non-fluorescent. The pigments may be present in the composition in the amount of 0.1 to 5 percent by weight. The fluorescent red dye is present in the amount of 0.05 to 2 percent by weight (col. 3 lines 1-23). The reference discloses that other ingredients or additives that are typical for ink jet ink such as surfactants, biocides and humectants may be added to the ink composition (col. 3 line 66-col. 4 line 7). The reference remains silent as to which specific surfactant may be used and to whether or not the non-fluorescence coloring material is an azo dye. However, it is the position of the Examiner that any known surfactant and yellow dye, such as nonionic surfactants including Acetylenol EH and azo dyes having the properties claimed by Applicant, may be used because the reference broadly discloses surfactants and yellow dye. The reference also discloses that the ink composition may have a surface tension from about 15 to about 70 dyne/cm (col. 4 lines 20-23). Bauer et al fail to teach a glycerin, urea and its derivatives and a specific surfactant.

Teraoka et al teach a fluorescent ink for ink jet recording comprising a dye having a pyrene ring and triethanolamine (col. 3 lines 49-51). The dye having the pyrene ring may be a water-soluble fluorescent dye such as Solvent Green 7 which may be used in the ink composition in the amount from 0.2 to 8 percent by weight (col. 3 line 56- col. 4 line 20). The reference further teaches that the pH value of the ink composition is in the range of 9 to 14 (col. 4 lines 45-50). The liquid medium of the ink composition is a mixture of water and a water-soluble organic solvent which includes ethylene glycol, diethylene glycol, glycerin (first organic compound of (i)), ethanol and isopropyl alcohol (monohydric alcohol) present in the amount of 10 to 40 percent by weight (col. 5 lines 10-34). A nonionic surfactant (second organic compound of (i)) may be present in the ink composition which includes surfactants such as ethylene oxide adducts of acetylene glycol (which is known to have the formula set forth in claim 25 and also known as Acetylenol EH in examples), present in the amount of 0.01 to 10 percent by weight (col. 5 lines 40-66). Other additives such as urea and urea derivative, viscosity modifier, preservative, antioxidant and fungicide may be present in the ink composition (col. 6 lines 9-14).

Tochihara et al and Teraoka et al are combinable because they are from the same field of endeavor.

Therefore it would have been obvious to one of ordinary skill in the art to use the additive taught by Teraoka et al in the ink composition of Tochihara et al because Tochihara discloses that additives that are typical for ink jet ink may be used, which would include urea and its derivatives and the specific surfactant taught by Teraoka et al.

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Regarding the glycerin, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have replaced diethylene glycol with glycerin because the substitution of art recognized equivalents as shown by Teraoka et al would have been within the level of ordinary skill in the art.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Veronica F. Faison whose telephone number is 571-272-1366. The examiner can normally be reached on Monday-Thursday and alternate Fridays 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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